POOR LEGIBILITY

PORTIONS OF THIS DOCUMENT MAY BE UNREADABLE, DUE TO THE QUALITY OF THE ORIGINAL

JUN 1 0 1989

4WD-SISB

Versar, Inc. 1520 Kensington Road Suite 115 Cak Brook, Illinois 60521

RE: 4-RIN-1289-89 4-RIN-1290-89

Dear Mr. Posse:

This is in response to your Freedom of Information Act (FOIA) requests for Mall of Memphis and Central Hardware in Memphis. Tennessee, from Region IV files.

Please find enclosed a copy of the records you requested.

The fees are waived as de minimis.

The Mall of Memphis site was placed on the CERCLIS list from Environmental Photographic Interpretation Center (EPIC) analysis of aerial photography for further investigation from the ground. If you have any questions, please call Charlie Stevens at (404) 347-5065.

Sincerely,

II. Kirk Lucius Freedom of Information Coordinator

Enclosures

4WD-SAS 4WD-SAS 4WD-SISB

CS:aa:Doc FOIA1289:6/14/89:5065

JI REQUEST

XPEDITIOUS HANDLING REQUIRED

ROUT	INC SI	LIP I	DATE_	6/1	77
DECE	Medica	RIR	·	1289	-589
6/2	89,000	DUE DA	TE_	ulis	
1. 1	Nask		2	5456	3
2	Han	be			
_					

· ·	+000 0*	•	ห:	 011
				 Charle
			•	
	<u> </u>			

PROCEDURES FOR HANDLING FOIA REQUESTS

- 1. The FOI Officer will maintain FOIA records and will forward a copy of each request to the appropriate ACTION OFFICE FOI Coordinator.

 ACTION OFFICE personnel will gather the requested information and, as required, consult a designated Assistant Regional Counsel for withholding any records.
- 2. If the request is too broad, or asks for voluminous records, ACTION OFFICE personnel who are most familiar with the requested records should call the requester and ask for clarification.
- 3. Use the checklist to ensure all procedures are followed.
- 4. The <u>ACTION OFFICE</u> Coordinator will calculate fees according to the regulations and prepare the written response. They will also assist in coordinating with ORC and the FOI Office when any requested information is to be withheld.
- 5. If you need an extension beyond the normal 10 working day limit to respond to an FOIA request, please contact your FOIA Coordinator.
- For detailed procedures on responding to an FOI request, you should consult the Regional Order and FOI Manual.



4-RIN-128189 Junion

May 30, 1989

Ms. Phyllis Strong U.S. EPA, Region IV 345 Courtland Street NE Atlanta, Georgia 30365

RE: Mall of Memphis, American Way Road, Memphis TN, 38118, Shelby County, U.S. EPA ID No. TND980727663

Dear Ms. Strong:

Versar is a nationally recognized environmental consulting firm which has been retained to perform an environmental assessment of the area near Mall of Memphis. As part of our assessment, Versar requests a copy of all CERCLA files on this site. During a recent phone conversation, Charles Stevens of U.S. EPA IV indicated that this site may have been mistakenly placed on the CERCLIS list. If this is the case, Versar would appreciate written confirmation that the Mall of Memphis was mistakenly placed on the CERCLIS.

If you have any questions or need further information, please feel free to contact me at 990-7555. Thank you for your time and consideration.

Sincerely, Versar, Inc.

Mark Bosse

OI REQUEST

XPEDITIOUS HANDLING REQUIRED

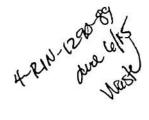
RC	פאודטס	SLIP	DATE	6/1	
CT-35-15	TO THE STATE OF	N R	IN -	1290	-¥89
bl	2/84/2	DUE	DATE .	6/15	f
1.	Was	te		ISB	
2.	Han	rke			
_					ו

COMMENTS AND CLARIFICATION:	-
	- - 1.02
	harle
	_
	-
	*

PROCEDURES FOR HANDLING FOIA REQUESTS

- The FOI Officer will maintain FOIA records and will forward a cop of each request to the appropriate <u>ACTION OFFICE</u> FOI Coordinator. <u>ACTION OFFICE</u> personnel will gather the requested information and as required, consult a designated Assistant Regional Counsel for withholding any records.
- 2. If the request is too broad, or asks for voluminous records, ACTI OFFICE personnel who are most familiar with the requested records should call the requester and ask for clarification.
- 3. Use the checklist to ensure all procedures are followed.
- 4. The <u>ACTION OFFICE</u> Coordinator will calculate fees according to the regulations and prepare the written response. They will also ass in coordinating with ORC and the POI Office when any requested information is to be withheld.
- If you need an extension beyond the normal 10 working day limit t respond to an FOIA request, please contact your FOIA Coordinator.
- For detailed procedures on responding to an FOI request, you show consult the Regional Order and FOI Manual.





May 30, 1989

Ms. Phyllis Strong U.S. EPA, Region IV 345 Courtland Street NE Atlanta, Georgia 30365

RE: Central Hardware, 3292 Austin Peay Highway, Memphis TN, 38128, Shelby County, EPA ID No. TND980838700

Dear Ms. Strong:

Versar is a nationally recognized environmental consulting firm which has been retained to perform an environmental assessment of the Central Hardware property at 3292 Austin Peay Highway. As part of our assessment, Versar requests a copy of all CERCLA files on this site.

If you have any questions or need further information, please feel free to contact me at 990-7555. Thank you for your time and consideration.

Sincerely, Versar, Inc.

Mark Bosse

REPORT HAZARDOUS WASTE SITE INVESTIGATION CENTRAL HARDWARE-RALEIGH MEMPHIS, TENNESSEE

INTRODUCTION

A hazardous waste site field investigation (HWSI) was conducted at Central Hardware - Raleigh on July 8, 1981 by Mr. R. J. Bruner III, U. S. Environmental Protection Agency (EPA), Region IV, Surveillance and Analysis Division (SAD), assisted by Jack Scott, Ecology and Environment, Inc. Mr. Larry Engledow, Manager, Central Hardware - Raleigh also assisted in the investigation. This HWSI involved an EPIC site formerly referred to as, field adjacent to K-Mart store at 3252 Austin Peay Highway. The site was inspected on April 30, 1980 by Messrs. Tom Runyon and Jim McMinn, EPA, Region IV, Enforcement Division (ED) (1). The HWSI was requested by Jim Wilburn, Technical Manager, Memphis Study Project.

STUDY AREA

Central Hardware - Raleigh is a large retail hardware store located at 3292 Austin Peay Highway (see figure 1). There is a steep bank behind the store with a wet area near the toe. The wet area was a result of the excavation for the store cutting into an existing groundwater zone. Several areas of dead vegetation were observed on the bank especially around the wet area (see figure 2). The investigators noted that in nearly every instance there were weeds associated with the dead vegetation. When asked about this, Mr. Engledow informed the investigators that Ansar herbicide had been used on the bank for spot weed control. The active ingredient in Ansar is a monosodium acid of methanearsenate.

RESULTS AND DISCUSSION

A soil sample was collected from the wet area near the toe of the bank behind the store. A data summary is presented in table 1 and complete analytical results are included in appendix A. The soil sample contained traces of p,p'-DDT (<20~ug/kg), p,p'-DDE (<10~ug/kg) and p,p'-DDD (<10~ug/kg), and a slightly elevated concentration of arsenic (76~mg/kg).

METHODOLOGY

All water and soil/sediment samples collected during this investigation were collected in accordance with standard operating procedures of the Water Surveillance Branch (2). All laboratory analyses were conducted by the Laboratory Services Branch (LSB), SAD in accordance with standard procedures and protocols of the LSB.

REFERENCES

- "Hazardous Waste Site Investigations Memphis, Tennesse First Phase;"
 U. S. Environmental Protection Agency, Region IV, Enforcement Division,
 June 1980.
- 2. Water Surveillance Branch Standard Operating Procedures and Quality

 Assurance Manual (Draft), U.S. Environmental Protection Agency, Region

 IV, Surveillance and Analysis Division; August 29, 1980.

TABLE 1 DATA SUMMARY CENTRAL HARDWARE - RALEIGH MEMPHIS, TENNESSEE

CHR-100 Soil sample toe of slope behind store

ORGANIC COMPOUNDS		(ug/kg)
p,p'-DDT ¹ p,p'-DDE ¹ p,p'-DDD ¹		<20 ^a <10 ^a <10 ^a
INORGANIC ELEMENTS	AND COMPOUNDS	(mg/kg)
Arsenic I Barium Chromium I Copper I Nickel I Lead I Strontium Titanium Vanadium Yttrium Zinc I Mercury I Aluminum Manganese Calcium Magnesium Iron Cyanide		76 89 26 15 14 12 18 447 44 11 38 0.06 21,200 390 1,800 2,500 25,600 0.119

All concentrations are calculated on a dry weight basis.

^{1 -} Compound/element is on the NRDC list of priority pollutants.

a - Presumptive evidence of presence of materials, not confirmed on second GC column or on GC/MS.

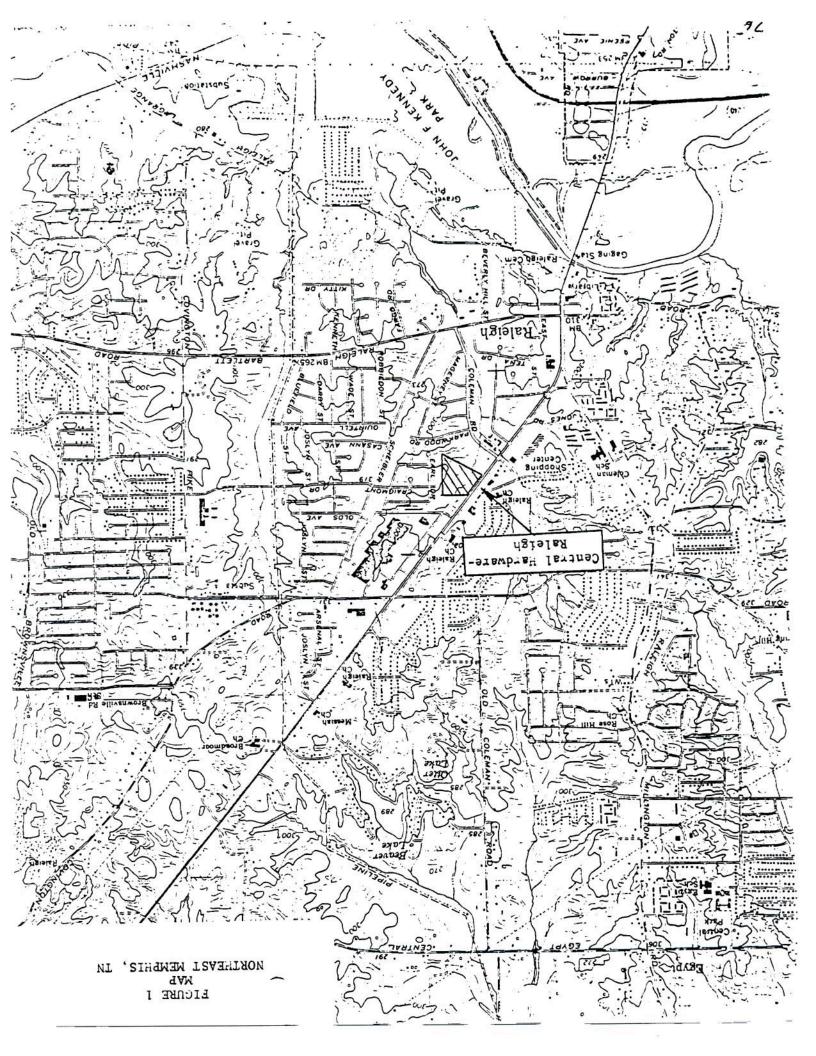
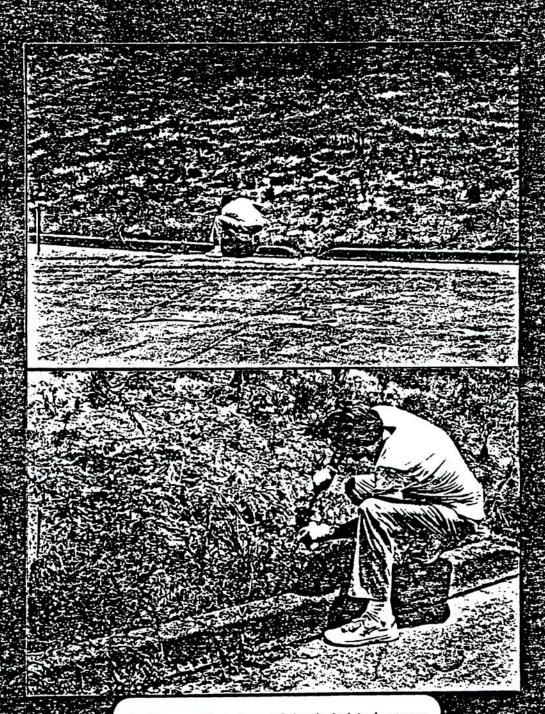


FIGURE 2
35mm PHOTOGRAPHS
CENTRAL HARDWARE - RALEIGH
MEMPHIS, TN



Soil sampling toe of bank behind store.

REPORT HAZARDOUS WASTE SITE INVESTIGATION CENTRAL HARDWARE-RALEIGH MEMPHIS, TENNESSEE

INTRODUCTION

A hazardous waste site field investigation (HWSI) was conducted at Central Hardware - Raleigh on July 8, 1981 by Mr. R. J. Bruner III, U. S. Environmental Protection Agency (EPA), Region IV, Surveillance and Analysis Division (SAD), assisted by Jack Scott, Ecology and Environment, Inc. Mr. Larry Engledow, Manager, Central Hardware - Raleigh also assisted in the investigation. This HWSI involved an EPIC site formerly referred to as, field adjacent to K-Mart store at 3252 Austin Peay Highway. The site was inspected on April 30, 1980 by Messrs. Tom Runyon and Jim McMinn, EPA, Region IV, Enforcement Division (ED) (1). The HWSI was requested by Jim Wilburn, Technical Manager, Memphis Study Project.

STUDY AREA

Central Hardware - Raleigh is a large retail hardware store located at 3292 Austin Peay Highway (see figure 1). There is a steep bank behind the store with a wet area near the toe. The wet area was a result of the excavation for the store cutting into an existing groundwater zone. Several areas of dead vegetation were observed on the bank especially around the wet area (see figure 2). The investigators noted that in nearly every instance there were weeds associated with the dead vegetation. When asked about this, Mr. Engledow informed the investigators that Ansar herbicide had been used on the bank for spot weed control. The active ingredient in Ansar is a monosodium acid of methanearsenate.

RESULTS AND DISCUSSION

A soil sample was collected from the wet area near the toe of the bank behind the store. A data summary is presented in table 1 and complete analytical results are included in appendix A. The soil sample contained traces of p,p'-DDT (<20~ug/kg), p,p'-DDE (<10~ug/kg) and p,p'-DDD (<10~ug/kg), and a slightly elevated concentration of arsenic (76~mg/kg).

METHODOLOGY

All water and soil/sediment samples collected during this investigation were collected in accordance with standard operating procedures of the Water Surveillance Branch (2). All laboratory analyses were conducted by the Laboratory Services Branch (LSB), SAD in accordance with standard procedures and protocols of the LSB.

REFERENCES

- "Hazardous Waste Site Investigations Memphis, Tennesse First Phase;"
 U. S. Environmental Protection Agency, Region IV, Enforcement Division,
 June 1980.
- 2. Water Surveillance Branch Standard Operating Procedures and Quality

 Assurance Manual (Draft), U.S. Environmental Protection Agency, Region

 IV, Surveillance and Analysis Division; August 29, 1980.

TABLE 1 DATA SUMMARY CENTRAL HARDWARE - RALEIGH MEMPHIS, TENNESSEE

CHR-100 Soil sample toe of slope behind store

ORGANIC COMPOUNDS	(ug/kg)
p,p'-DDT1	<20 ^a <10 ^a
p,p'-DDE ¹ p,p'-DDD ¹	<10 ^a
INORGANIC ELEMENTS AND COMPOUNDS	(mg/kg)
Arsenicl	76
Barium	89
Chromium ¹	26
Copper,	. 15
Nickel ¹	14
Lead 1	12
Strontium	18
Titanium	447
Vanadium	44
Yttrium	11
Zinc ¹	38
Mercury ¹ .	0.06
Aluminum	21,200
Manganese	390
Calcium	1,800
Magnesium	2,500
Iron	25,600
Cyanide	0.119
2015 F-779 A.Z.O. FASSEALOWS	

- All concentrations are calculated on a dry weight basis.
- 1 Compound/element is on the NRDC list of priority pollutants.
- a Presumptive evidence of presence of materials, not confirmed on second GC column or on GC/MS.

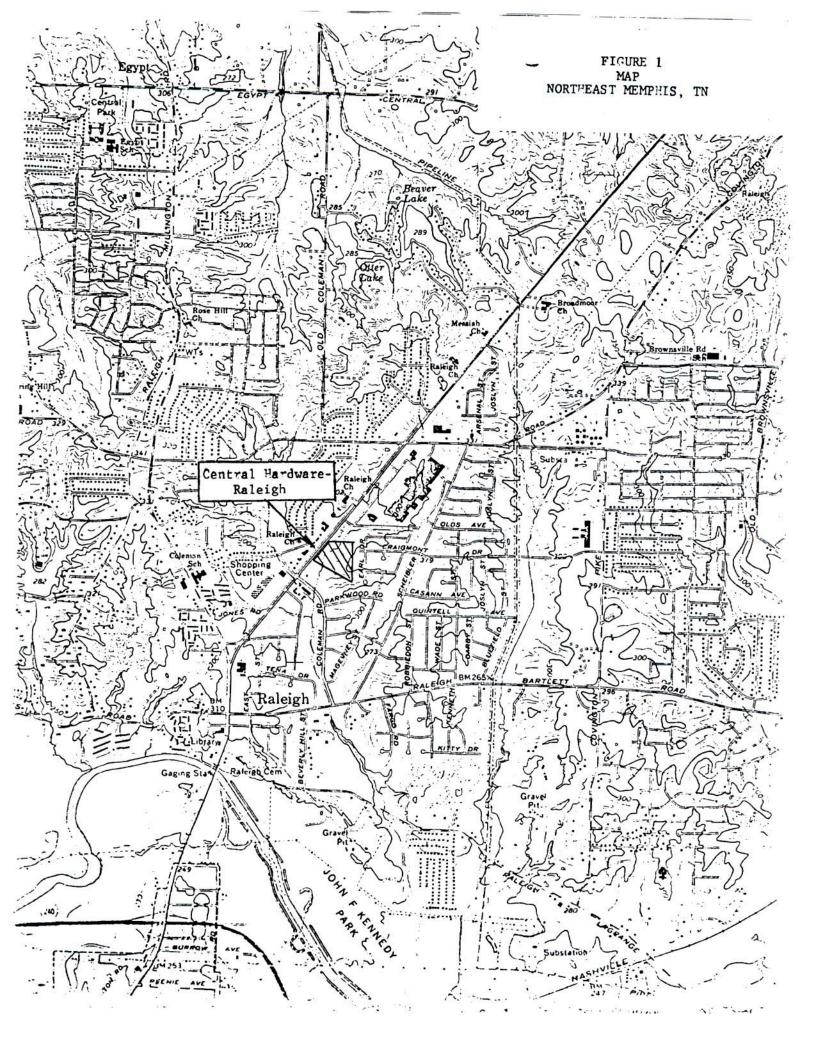


FIGURE 2
35mm PHOTOGRAPHS
CENTRAL HARDWARE - RALEIGH
MEMPHIS, TN



Soil sampling toe of bank behind store.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OCT 2 1 1981

SUB ECT: Review of the Hazardous Waste Site Investigation Report for Central Hardware Raleigh, Memphis, Tennessee

FROM: Chief, Engineering Section

Jim Wilburn, Technical Manager Memphis Study Project

THRU: Michael R. Carter, Chief

Water Surveillance Branch

m of Carton

A copy of the subject report is attached for review and comment by your staff. Please provide this office with your written comments (or lack thereof) by COB October 28, 1981. Specific questions should be addressed to Bo Bruner (250-3300).

M. D. Lair

Attachment

cc: Bruner

REPORT HAZARDOUS WASTE SITE INVESTIGATION CENTRAL HARDWARE-RALEIGH MEMPHIS, TENNESSEE

INTRODUCTION

A hazardous waste site field investigation (HWSI) was conducted at Central Hardware - Raleigh on July 8, 1981 by Mr. R. J. Bruner III, U. S. Environmental Protection Agency (EPA), Region IV, Surveillance and Analysis Division (SAD), assisted by Jack Scott, Ecology and Environment, Inc. Mr. Larry Engledow, Manager, Central Hardware - Raleigh also assisted in the investigation. This HWSI involved an EPIC site formerly referred to as, field adjacent to K-Mart store at 3252 Austin Peay Highway. The site was inspected on April 30, 1980 by Messrs. Tom Runyon and Jim McMinn, EPA, Region IV, Enforcement Division (ED) (1). The HWSI was requested by Jim Wilburn, Technical Manager, Memphis Study Project.

STUDY AREA

Central Hardware - Raleigh is a large retail hardware store located at 3292 Austin Peay Highway (see figure 1). There is a steep bank behind the store with a wet area near the toe. The wet area was a result of the excavation for the store cutting into an existing groundwater zone. Several areas of dead vegetation were observed on the bank especially around the wet area (see figure 2). The investigators noted that in nearly every instance there were weeds associated with the dead vegetation. When asked about this, Mr. Engledow informed the investigators that Ansar herbicide had been used on the bank for spot weed control. The active ingredient in Ansar is a monosodium acid of methanearsenate.

RESULTS AND DISCUSSION

A soil sample was collected from the wet area near the toe of the bank behind the store. A data summary is presented in table 1 and complete analytical results are included in appendix A. The soil sample contained traces of p,p'-DDT (<20 ug/kg), p,p'-DDE (<10 ug/kg) and p,p'-DDD (<10 ug/kg), and a slightly elevated concentration of arsenic (76 ug/kg).

METHODOLOGY

All water and soil/sediment samples collected during this investigation were collected in accordance with standard operating procedures of the Water Surveillance Branch (2). All laboratory analyses were conducted by the Laboratory Services Branch (LSB), SAD in accordance with standard procedures and protocols of the LSB.

REFERENCES

- "Hazardous Waste Site Investigations Memphis, Tennesse First Phase;"
 U. S. Environmental Protection Agency, Region IV, Enforcement Division,
 June 1980.
- 2. Water Surveillance Branch Standard Operating Procedures and Quality

 Assurance Manual (Draft), U.S. Environmental Protection Agency, Region

 IV, Surveillance and Analysis Division; August 29, 1980.

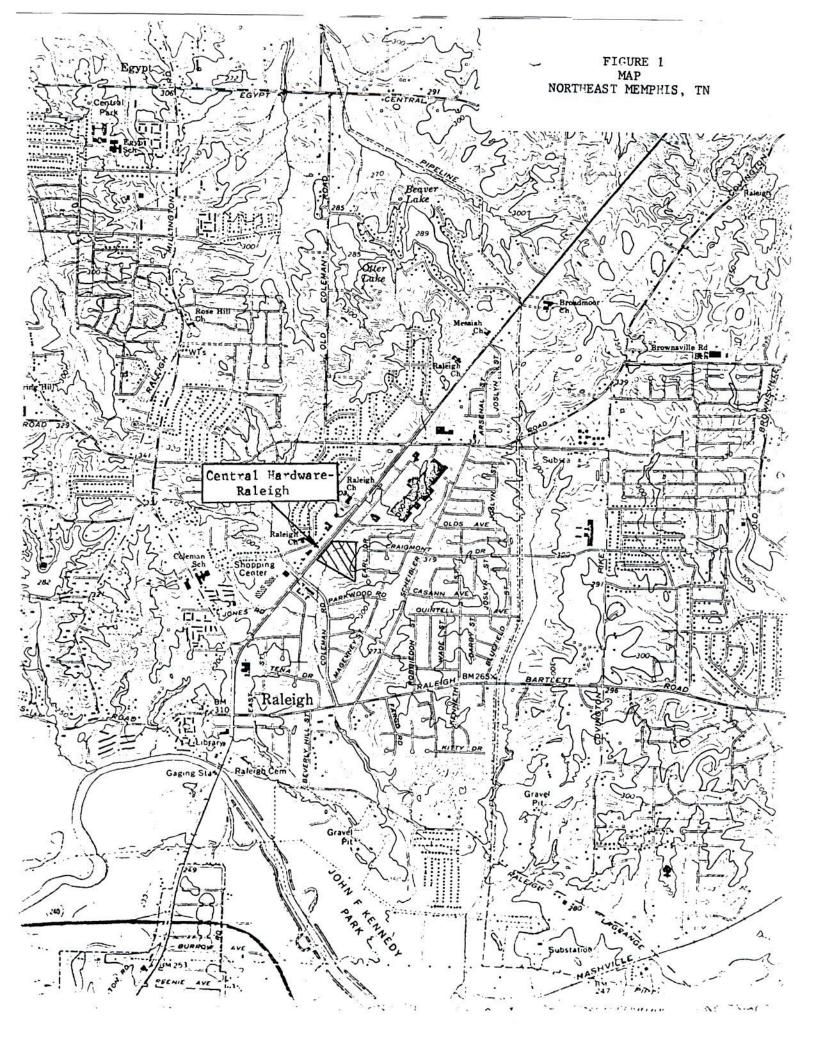
TABLE 1 DATA SUMMARY CENTRAL HARDWARE - RALEIGH MEMPHIS, TENNESSEE

CHR-100 Soil sample toe of slope behind store

ORGANIC COMPOUNDS	(ug/kg)
p,p'-DDT ¹ p,p'-DDE ¹ p,p'-DDD ¹	<20 ^a <10 ^a <10 ^a
INORGANIC ELEMENTS AND COMPOUNDS	(mg/kg)
Arsenic ¹ Barium Chromium ¹ Copper ¹ Nickel ¹ Lead ¹ Strontium Titanium Vanadium Yttrium Zinc ¹ Mercury ¹ Aluminum Manganese Calcium Magnesium Iron Cyanide	76 89 26 15 14 12 18 447 44 11 38 0.06 21,200 390 1,800 2,500 25,600 0.119

All concentrations are calculated on a dry weight basis.

- 1 Compound/element is on the NRDC list of priority pollutants.
- a Presumptive evidence of presence of materials, not confirmed on second GC column or on GC/MS.



Soil sampling toe of bank behind store.

SOURE SHOULD STELL HENDRE HERD THE STELLE SHOULD SHOULD STELLE SHOULD STELLE SHOULD STELLE SHOULD STELLE SHOULD STELLE SHOULD STELLE SHOULD SHOULD STELLE SHOULD STELLE SHOULD STELLE SHOULD SHOULD STELLE SHOULD STELLE SHOULD SH

REPORT HAZARDOUS WASTE SITE INVESTIGATION CENTRAL HARDWARE-RALEIGH MEMPHIS, TENNESSEE

INTRODUCTION

A hazardous waste site field investigation (HWSI) was conducted at Central Hardware - Raleigh on July 8, 1981 by Mr. R. J. Bruner III, U. S. Environmental Protection Agency (EPA), Region IV, Surveillance and Analysis Division (SAD), assisted by Jack Scott, Ecology and Environment, Inc. Mr. Larry Engledow, Manager, Central Hardware - Raleigh also assisted in the investigation. This HWSI involved an EPIC site formerly referred to as, field adjacent to K-Mart store at 3252 Austin Peay Highway. The site was inspected on April 30, 1980 by Messrs. Tom Runyon and Jim McMinn, EPA, Region IV, Enforcement Division (ED) (1). The HWSI was requested by Jim Wilburn, Technical Manager, Memphis Study Project.

STUDY AREA

Central Hardware - Raleigh is a large retail hardware store located at 3292 Austin Peay Highway (see figure 1). There is a steep bank behind the store with a wet area near the toe. The wet area was a result of the excavation for the store cutting into an existing groundwater zone. Several areas of dead vegetation were observed on the bank especially around the wet area (see figure 2). The investigators noted that in nearly every instance there were weeds associated with the dead vegetation. When asked about this, Mr. Engledow informed the investigators that Ansar herbicide had been used on the bank for spot weed control. The active ingredient in Ansar is a monosodium acid of methanearsenate.

RESULTS AND DISCUSSION

A soil sample was collected from the wet area near the toe of the bank behind the store. A data summary is presented in table 1 and complete analytical results are included in appendix A. The soil sample contained traces of p,p'-DDT (<20~ug/kg), p,p'-DDE (<10~ug/kg) and p,p'-DDD (<10~ug/kg), and a slightly elevated concentration of arsenic (76~mg/kg).

METHODOLOGY

All water and soil/sediment samples collected during this investigation were collected in accordance with standard operating procedures of the Water Surveillance Branch (2). All laboratory analyses were conducted by the Laboratory Services Branch (LSB), SAD in accordance with standard procedures and protocols of the LSB.

REFERENCES

- "Hazardous Waste Site Investigations Memphis, Tennesse First Phase;"
 U. S. Environmental Protection Agency, Region IV, Enforcement Division,
 June 1980.
- 2. Water Surveillance Branch Standard Operating Procedures and Quality

 Assurance Manual (Draft), U.S. Environmental Protection Agency, Region

 IV, Surveillance and Analysis Division; August 29, 1980.

TABLE 1 DATA SUMMARY CENTRAL HARDWARE - RALEIGH MEMPHIS, TENNESSEE

CHR-100 Soil sample toe of slope behind store

ORGANIC COMPOUNDS	(ug/kg)
p,p'-DDT ¹ p,p'-DDE ¹ p,p'-DDD ¹	<20 ^a <10 ^a <10 ^a
INORGANIC ELEMENTS AND COMPOUNDS	(mg/kg)
Arsenic ¹ Barium Chromium ¹ Copper ¹ Nickel ¹ Lead ¹ Strontium Titanium Vanadium Yttrium Zinc ¹ Mercury ¹ Aluminum Manganese Calcium Magnesium Iron Cyanide	76 89 26 15 14 12 18 447 44 11 38 0.06 21,200 390 1,800 2,500 25,600 0.119

All concentrations are calculated on a dry weight basis.

- 1 Compound/element is on the NRDC list of priority pollutants.
- a Presumptive evidence of presence of materials, not confirmed on second GC column or on GC/MS.

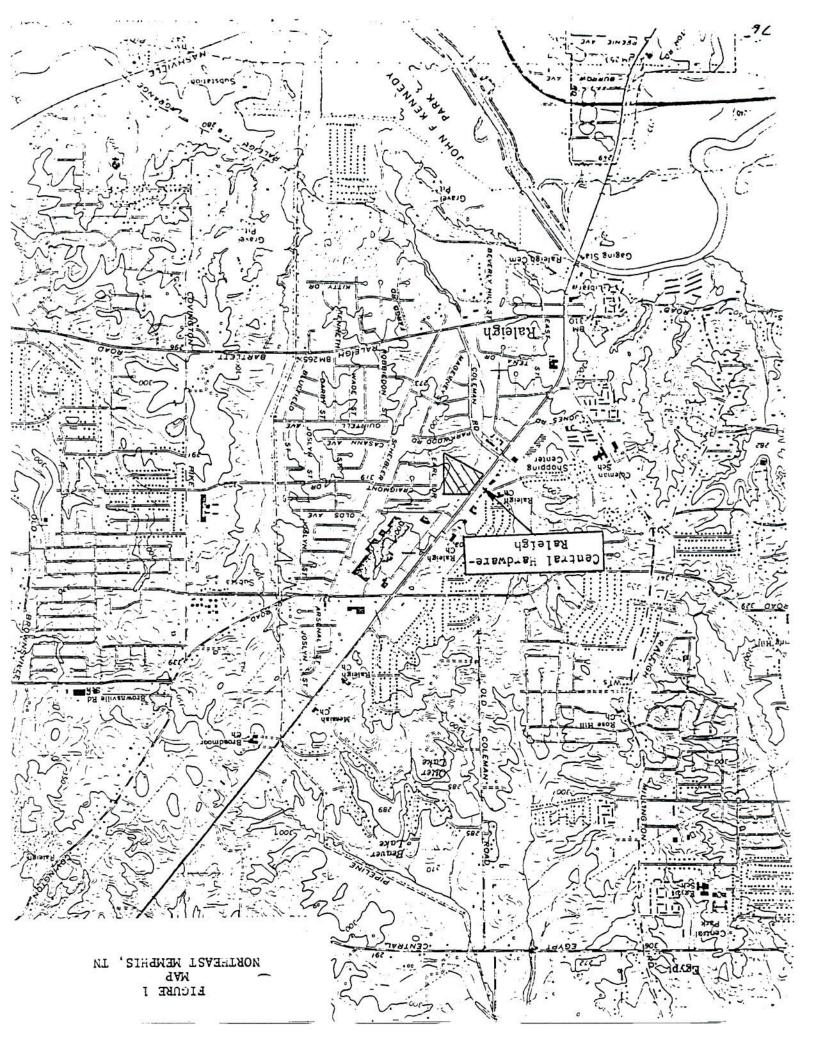
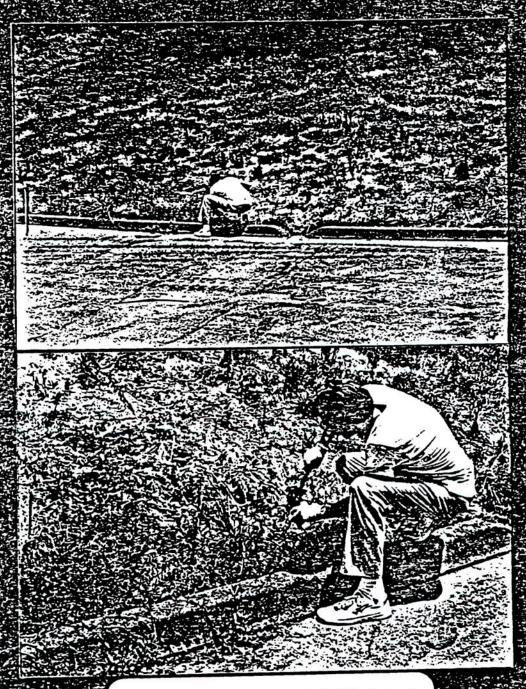
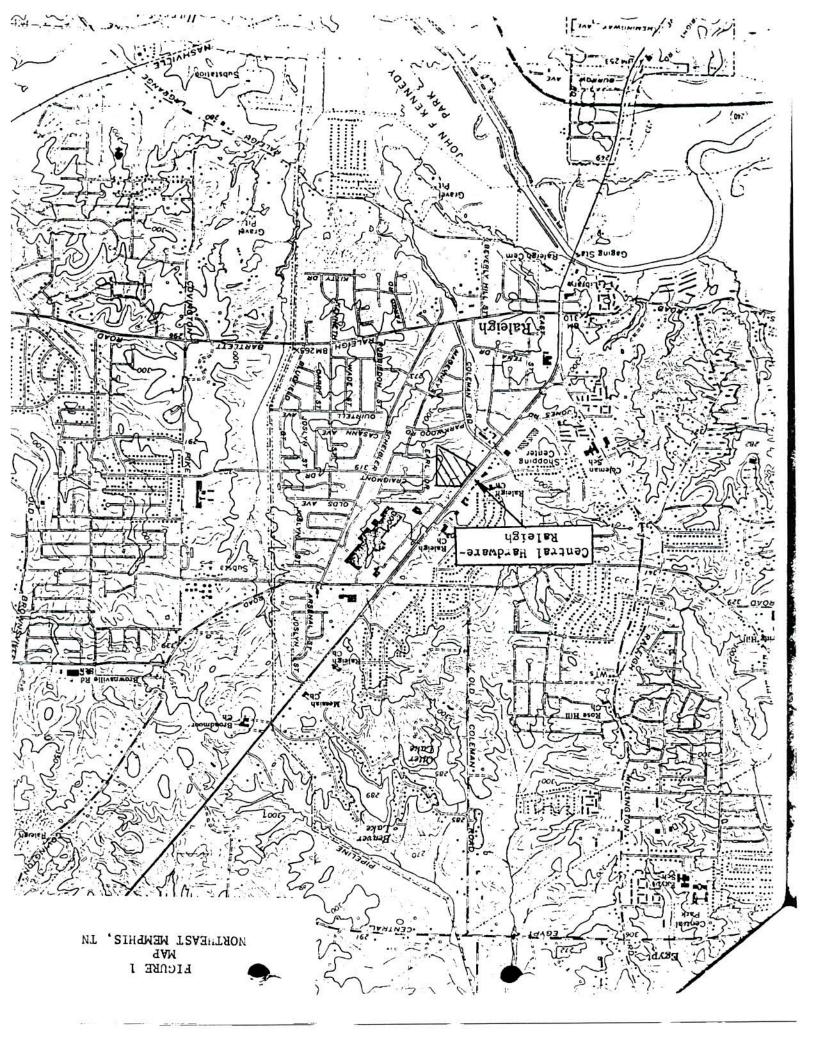


FIGURE 2
35mm PHOTOGRAPHS
CENTRAL HARDWARE - RALEIGH
MEMPHIS, TN



Soil sampling toe of bank behind store.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE:

SUBJECT: Conclusions and Recommendations - Hazardous Waste Site Investigation - Central Hardware - Raleigh - Memphis, Tennessee

FROM: Environmental Engineer Water Surveillance Branch

TO: Jim Wilburn, Technical Manager

Memphis Study Project

THRU: Doug Lair, Chief

Engineering Section

THRU: Michael R. Carter, Chief

Water Surveillance Branch

A hazardous waste site field investigation (HWSI) was conducted at Central Hardware - Raleigh on July 8, 1981 by Mr. R. J. Bruner III, U. S. Environmental Protection Agency (EPA), Region IV, Surveillance and Analysis Division (SAD), assisted by Jack Scott, Ecology and Environment, Inc. Mr. Larry Engledow, Manager, Central Hardware - Raleigh also assisted in the investigation.

Central Hardware - Raleigh is a large retail hardware store located at 3292 Austin Peay Highway. There is a steep bank behind the store with a wet area near the toe. The wet area was a result of the excavation for the store cutting into an existing groundwater zone. Several areas of dead vegetation were observed on the bank, especially around the wet area. The investigators noted that in nearly every instance there were weeds associated with the dead vegetation. When asked about this, Mr. Engledow informed the investigators that Ansar herbicide had been used on the bank for spot weed control. The active ingredient in Ansar is a monosodium acid of methanearsenate.

A soil sample was collected from the wet area near the toe of the bank behind the store. This soil sample contained traces of p,p'-DDT (<20 ug/kg), p,p'-DDE (<10 ug/kg) and p,p'-DDD (<10 ug/kg), and a slightly elevated concentration of arsenic (76 mg/kg). The concentrations of DDT and metabolites were very low and are not considered significant. The elevated arsenic concentration was probably the result of the arsenic based herbicide being sprayed in the bank.

Based on the data and information collected during this investigation, there is no evidence of the disposal of hazardous material at this location. No further action is recommended at this site.

R. J. Bruner III, P.E.

cc: Finger/Adams/Carter/Lair

CONFIDELITIAL

This document is prepared in and spacion of enforcement litigation. It is not subject to discovery.

UNITED S._ res environmental protectio, _.gency

DATE NOV 2 5 1981

SUBJECT Report - Hazardous Waste Site Investigation - Central Hardward - Raleigh, Memphis, Tennessee

FROM Director

Environmental Services Division

TO Howard Zeller, Acting Director Enforcement Division

Attached is a copy of the subject report. Copies of this report should be sent to the following individuals:

Mr. Larry Ledford Tennessee Division of Solid Waste Management 814 Jefferson Avenue Memphis, Tennessee 38105

Mr. Larry Engledow, Manager Central Hardware - Raleigh 3292 Austin Peay Highway Memphis, Tennessee 38128

James H. Finger

Attachment

cc: Wilburn

Smith/Stonebraker/Mathis

Hopkins

Newton/Turnipseed

Adams

Carroll/Bennett

Carter/Lair

Bruner

REPORT HAZARDOUS WASTE SITE INVESTIGATION CENTRAL HARDWARE-RALEIGH MEMPHIS, TENNESSEE

INTRODUCTION

A hazardous waste site field investigation (HWSI) was conducted at Central Hardware - Raleigh on July 8, 1981 by Mr. R. J. Bruner III, U. S. Environmental Protection Agency (EPA), Region IV, Surveillance and Analysis Division (SAD), assisted by Jack Scott, Ecology and Environment, Inc. Mr. Larry Engledow, Manager, Central Hardware - Raleigh also assisted in the investigation. This HWSI involved an EPIC site formerly referred to as, field adjacent to K-Mart store at 3252 Austin Peay Highway. The site was inspected on April 30, 1980 by Messrs. Tom Runyon and Jim McMinn, EPA, Region IV, Enforcement Division (ED) (1). The HWSI was requested by Jim Wilburn, Technical Manager, Memphis Study Project.

STUDY AREA

Central Hardware - Raleigh is a large retail hardware store located at 3292 Austin Peay Highway (see figure 1). There is a steep bank behind the store with a wet area near the toe. The wet area was a result of the excavation for the store cutting into an existing groundwater zone. Several areas of dead vegetation were observed on the bank especially around the wet area (see figure 2). The investigators noted that in nearly every instance there were weeds associated with the dead vegetation. When asked about this, Mr. Engledow informed the investigators that Ansar herbicide had been used on the bank for spot weed control. The active ingredient in Ansar is a monosodium acid of methanearsenate.

RESULTS AND DISCUSSION

A soil sample was collected from the wet area near the toe of the bank behind the store. A data summary is presented in table 1 and complete analytical results are included in appendix A. The soil sample contained traces of p,p'-DDT (<20~ug/kg), p,p'-DDE (<10~ug/kg) and p,p'-DDD (<10~ug/kg), and a slightly elevated concentration of arsenic (76~mg/kg).

METHODOLOGY

All water and soil/sediment samples collected during this investigation were collected in accordance with standard operating procedures of the Water Surveillance Branch (2). All laboratory analyses were conducted by the Laboratory Services Branch (LSB), SAD in accordance with standard procedures and protocols of the LSB.

REFERENCES

- "Hazardous Waste Site Investigations Memphis, Tennesse First Phase;"
 U. S. Environmental Protection Agency, Region IV, Enforcement Division,
 June 1980.
- 2. Water Surveillance Branch Standard Operating Procedures and Quality

 Assurance Manual (Draft), U.S. Environmental Protection Agency, Region

 IV, Surveillance and Analysis Division; August 29, 1980.

TABLE 1 DATA SUMMARY CENTRAL HARDWARE - RALEIGH MEMPHIS, TENNESSEE

CHR-100 Soil sample toe of slope behind store

ORGANIC C	OMPOUNDS			(ug/kg)
p,p'-DDT ¹ p,p'-DDE ¹ p,p'-DDD ¹	8		le.	<20 ^a <10 ^a <10 ^a
INORGANIC	ELEMENTS AND	COMPOUNDS		(mg/kg)
Arsenic later and later an				76 89 26 15 14 12 18 447 44 11 38 0.06 21,200 390 1,800 2,500 25,600 0.119

All concentrations are calculated on a dry weight basis.

- 1 Compound/element is on the NRDC list of priority pollutants.
- a Presumptive evidence of presence of materials, not confirmed on second GC column or on GC/MS.

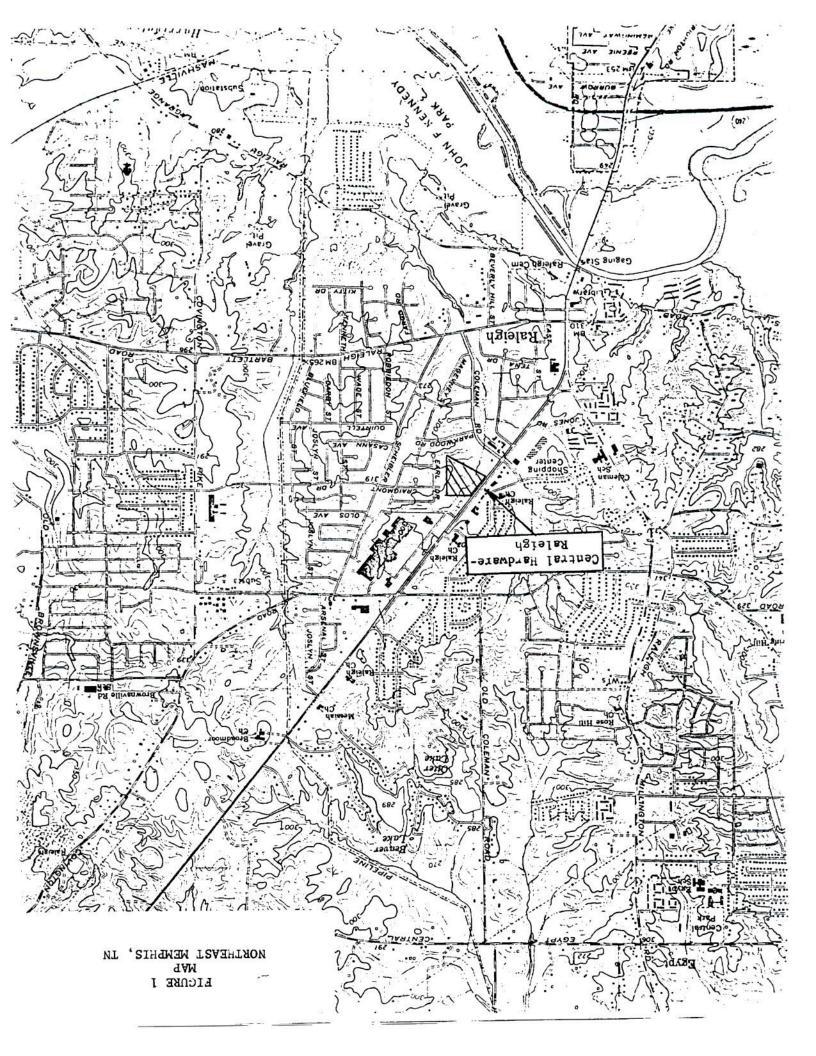
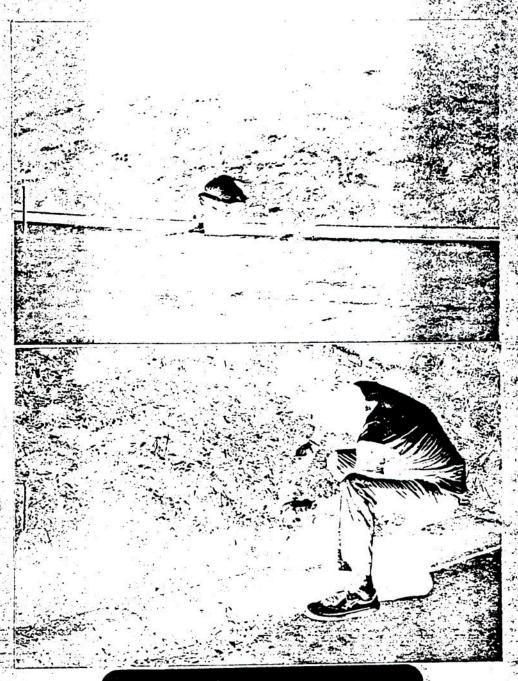


FIGURE 2 35mm PHOTOGRAPHS CENTRAL HARDWARE - RALEIGH MEMPHIS, TN



Soil sampling toe of bank behind store.

Analytical Data Sheets and Field Sheets

APPENDIX A

DATE:07/15/81

PESTÍCIUES/PCBIS AND OTHER CHLORINATED COUMPOUNDS DATA REPORTING SHEET SEDIMENT/SUL/SLUDGE (DRY WT)

EPA-SAD, RGN. IV

PROJECT #: 81-131 PROG ELEMENT #: HWSR

SAMPLE RECEIVED (DATE & TIME): 07/10/81

SOUNCE: CENTRAL HARDWARE HALEIGH

SAMPLE TYPE: SEDIM

SAMPLE START (UATE & TIME):07/08/81 1345

CITY: HALLIGH

STATE: TN

SAMPLE STOP (DATE & TIME): 00/00/00

STATION: CHH-100 TOE OF SLOPE HEHIND STORE

. SAD NO.: 81C2007

CHEMIST: E. W. Loy, Jr. COMPLETED 8-21-81

COMPOUND	STORET#	UNITS		COMPOUND	STORET#	UNITS
ALDRIN	3y333	6U UG/KG		alpha chlordane (11)	90	
DIELDRIN	34343		۰	gamma chlordane (11)		UG/KG
CHLUHDANE (TECH. MIATURE		- UG/KG		1-hydroxychlordene	-90 -	UG/KG
P.PI-DUT		20KN UG/KG		chlordene (11)	-90 -	UG/KG
P.PDUE	37361	10KN UG/KG		alpha chlordene (11)		UG/KG
P,P1-00D	and the second s	10KN UG/KG	۰	gamma chlordene (11)		UG/KG
ENDUSULFAN. ALPHA		6U UU/NU	•	transnonachlor (11)	90 -	UG/KG
ENDUSULFAN. BETA	34359		٠	O, P'- DDE		UG/KG
ENDUSULFAN SULFATE		5U UG/KG	•	O, P'- DDD		UG/NG
ENDRIN		10U UU/KU	۰	O, P'- DDT		UG/KG
ENDRIN ALDEHYDE		NA UG/KG		-1		
HEPTACHLOR (11)		6U UG/KG	•			UG/KG
HEPTACHLOR EPUXIDE		6UUU/KU		hexachlorocyclopentadiene	3 U	UG/KG
ALPHA-BHC		5UUG/KG		hexachloronorbornadiene	- 3 0 -	UG/KG
HE TA-HHC	34457	6U UG/KG	0	octachlorocyclopentene	 30 311	UG/KG
GAMMA-BHC (LINDANE)		6U UG/KG	0	heptachloronorbornene	$-\frac{70}{70}$	UG/KG
DEL TA-BHC		6U UG/KG	4	hexachlorobenzene	 70	UG/KG
PCH-1242 (AHOCLOH 1242)		70U UG/KG	0	The Party of the P		UG/KG
PCH-1254 (AHOCLOH 1254)		200U_UG/KG				UG/KG
PCB-1221 (AROCLUR 1221)	39491	70U UG/KG	0			UG/KG
PCH-1232 (AHUCLOR 1232)	39495	70U UG/KG				UG/KG
OCH-1248 (AHUCLOH 1248)	FUCKE	70U UG/KG	0			UG/KG
PCH-1260 (AROCLOR 1260)	39511	200U UG/KG	•			UG/KG •
PCH-1016 (AHOCLOR TUTE)		70UUG/KG	•			UG/KG
TUXAPHENE		200U UG/KU	•			UG/KG
TCOU (DIOXIN)	34676		٠			UG/KG
\$ MOISTURE	70320		•			UG/KG
28 SECTION 1990 (1997)			1551			¥

NOTES: 1) J-ESTIMATED VALUE

- 2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
- 3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- 4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
- 5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- O) A-AVERAGE VALUE

- 7) NA-COMPOUND NUT ANALYZED FOR
- 8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
- 9) CONFIRMED BY GC/MS
- 10) REPURIED AS INDIVIDUAL COMPOUNDS
- 11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE: 07/15/81

CITY: HALEIGH

PURGEABLE ORGANICS ANALYSIS DATA REPORTING SHEET SEDIMENT/SOIL/SLUDGE (DRY WI) EPA-SAU. RGN. IV ATHENS . GA

PROG ELEMENT #: HWSK PROJECT #: H1-131

SAMPLE TYPE: SEUIM

SAMPLE RECEIVED (DATE & TIME): 07/10/81 SAMPLE START (DATE & TIME):07/08/81 1345

SOURCE: CENTRAL HARDWARE HALEIGH

SAMPLE STUPIDATE & TIME): 00/00/00

STATION: CHR-100 TOE OF SLOPE HEHIND STURE

STATE: IN

SAD NO .: 01C2007

CHEMIST: E. W. Loy, Jr. COMPLETED 7/23/81

COMPOUND	STURET#	UNITS		COMPOUND	STORET#	UNITS
£	34421 81	J UG/KG				UG/KG
METHYL CHLOHIDE	34461	UG/KG				UG/KG
METHYL BROWIDE	34410	UG/KG	4			UG/KG
DICHLORODIFLOUROMETHANE	34334		0		<u> </u>	UG/KG
VINYL CHLORIDE	3449581					UG/KG
CHLURUETHANE.	34314 <u>81</u>	Committee of the Commit			and the second	UG/KG
METHYLENE CHLURIUE	3442681					UG/KG
TRICHLUNOFLUUNUNETHANE	3449181					UG/KU
1.1-DICHLURGETHYLENE	3450481		~			UG/KG
1.1-UICHLUROETHANE	34499 <u> </u>					UG/KG
1.5-IHANS-DICHTOROE HATENE	, 3454481		ž		 -	UG/KG
CHLURUFORM	34316 <u>8</u>		•			UG/KG
1 . Z-DICHLORGE THANE	345348					UG/KG
1.1.1-THICHLORUETHANE	J45098		•			UG/KG
CARHON TETRACHLURIDE	342498		•			UG/KG
DICHLOROPHOMOMETHANE	343308		•			UG/KG
1.2-DICHLUROPHUPANE	34544 <u>8</u>		•			UG/KG
THANS-1.3-DICHLORUPHOPENE	346978		٠			UG/KG
TRICHLORUETHYLENE	344878		3		 :	UG/KG
HENZENE	342378		٠			UG/KG
CHL GHOD I BHOMOME THANK	343078					UG/KG
1.1.2-TRICHLUNUETHANE	34514 <u>8</u>		Q			UG/KG
CIS-1.3-DICHLOROPROPENE	347028		٥		 -	UG/KG
2-CHLORUETHYL VINYL ETHER	345/78	LUG/KG	۰			UG/KG
BROROFORM	342408	U6/K6	•		 -	UG/KG
1.1.2.2-TETHACHLUROETHANE	345148	UG/NG	•			UC / # G
TETHACHLORDE THYLENE	34478 8	UG/KG	۰			UG/KG
TOLUENE	34483 8	UG/KG	٠			111. 12.6
CHLUROHENZENE	343048		•			UG/KG
ETHYLBENZENE	34374 81		•			UG/KG
ACRUL! IN	34213 _16		4			UG/KG
ACRYLUNITRILE	34610 _160		٠			UG/KG
사람들이 그렇게 하는 아들이 가지 않는 아들이 아들이 하는 것이 없는 그 아들이	703203		4			*
S MUISTURE	,,,,,,	~				

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF ____ 8 48/kg.

NOTES: 11 J-ESTIMATED VALUE

- 2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
- 1) L-ACTUAL VALUE IS ANOWN TO BE GREATER THAN VALUE GIVEN.
- 4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
- 5) 11-PHESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL

D) H-AVERAGE VALUE

/) NA-COMPOUND NOT ANALYZED FOR.

CITY: HALEIGH

A CONTRACTOR OF THE STATE OF TH

EPA-SAD. RGN. IV ATHENS . GA

PROJECT #: H1-131 PROG ELEMENT #: HWSR

SOUNCE: CENTRAL HARDWARE RALEIGH

SAMPLE TYPE: SEDIM

SAMPLE RECEIVED (DATE & TIME): 07/10/81 850

SAMPLE START (DATE & TIME):07/08/81 1345

SAMPLE STOP (DATE & TIME): 00/00/00

STATION: CHR-100 TOE OF SLOPE HEHIND STORE

STATE: TN

SAD NO.: 0102007 CHEMIST: E. W. LOV. Jr. COMPLETED 8/5/81

The state of the s

menosperature personal services and services them.	NO STORE	240 MO.: 81C5001	CHEMIST: E. W. L	OY, Jr. COMPLETED _8/5/81
COMPOUND	STURET# UNITS		CUMPOUND	STORET# UNITS
BIS (CHLOROMETHYL) EINER	34271NAUG/KG	BIS(2-ETHYLHEXY	VI) DUTUM ATE	30103 E 000H
N-NITHOSOD IMETHYLAMINE	34441NAUG/KG	OTSTEEL 11/	IL PHINALATE	39102UG/KG
1.5-DICHTOHOHENSENE	34539 _5,00011 UG/KG	BENZO(A) ANTHRAC	CENE 114	34323 5,000U UG/KG
1.3-UICHLOROKENZENE	34564 _5.000U UU/KU	a 3131-DICHFORORE		34529 5,000U UG/KG
1.4-DICHLUPUHENZENE	345/4 _5_000U_UG/KG	* DI-M-OCIYL PHIH		34634 5,000U UG/KG
MISIZ-CHLOPOETHYL) ETHER	34276 _5.000U UG/KG	* HENZO(B)FLUORAN		34599 5,0000 UG/KG
HE XACHL JROFTHANE	34344 _5.000U UU/KU			342335,000U_UG/KG
RIS(2-CHLUROISOPROPYL) ETHER	34286 _5_000L UG/KG	* HENZU(K)FLUORAN * BENZU-A-PYKENE	IHENE ISY	34245 5,0000 UG/KG
N-NITHOSUNT-N-PROPYLAMINE	34431 _5_000U_UG/KG	DENEU-A-FINGING	ant there are	34250UG/KG
NITHURENZENE	34450 _5_00011 UG/NG	* INUENO (1.2.3-C		34406 _5,000U UG/KG
HEXACHLOROBUTADIENE	39/05 _5_00011 UG/KG	9 1121516-UIBENZA		34559 5,000U UG/KG
1.2.4-TRICHI ORUMENZENE	34554 _5,00011_UU/KU	DE TECTORITY FERTE	ENE	34524UG/KG
NAPHTHALENE	34445 _5_000IL_UG/KG	4-CHLURUPHENUL		34589 5,0000 UG/KG
HIS (2-CHLORUE THOXY) METHANE	34201 _5_000U_UG/KG	C WITHOFILIOL		34544UG/KG
ISOPHONONE	34411 _5_000H_UG/KG	THEMOL TOCKING	T. 172	34695 5,000U UG/KG
HEXACHLOPOCYCLOPENTADJENE	34369 _5_00011 UG/KG	E T T DIME INTERNE		34609 5,000U UG/KG
2-CHI ORONAPHTHAL ENE	34584 _5.000II UG/KG	* Z+4-U1CHLORUPHE		34604 5,000U UG/KG
ACENAPHTHYLENE	34203 _5_000II UU/KG	PARACHI OCOMETÀ		34624UG/KG
ACENAPHIHENE	34209 _5_00011_UG/KG	 PARACHLORUMETA 2,4-DINITROPHEN 		34455UG/KG
DIMETHYL PHTHALATE	34344 _5_000IL_UG/NG	EAL DIMITIKOLUCIA		34619 13,000U UG/KG
S.4-DINI INDIOLUENE	34614 _5_000U_UG/KG	* 4,6-U1H1TH0-U-C		34660 7,800U UG/KG
2.6-CINITROTULUENE	34629 _5.000U_UG/KG	 PENTACHLUROPHEN 4-NITROPHENOL 	IOL	39061 7,800U UG/KG
4-CHLOROPHENTL PHENTL ETHER	3+644 _5_000U_UG/KG	* % MUISTURE		34649 5,000U UG/KG
FLUOMENE	34384 5.0001 UG/KG			70320%
DIETHYL PHTHALATE	34339 _5_000U_UG/KG			UG/KG
1.2-DIPHENYLHYUHAZINE 8/	34349 _5_00011_UG/KG			UG/KG
N-NITHOSODIPHENYLAMINE 9/	34436 _5_000U_UG/KG			UG/NG
HEXACHLORUHENZENE	39701 _5.000U_UG/NG	·		UG/KG
4-BRUMOPHENYL PHENYL ETHER	34634 _5_0001 UG/AG			UG/KG
PHENANTHRENE 10/	34464 _5.0001 UG/KG			UG/KG
ANTHRACENE 10/	34223 _5_000U_UG/KG			UG/KG
DI-N-HUTYL PHTHALATE	391125.00011 UG/NG			UG/KG
FLUUMANTHENE	34379 _5_000U_UG/NG			UG/KG
PYREUE	34472 _5.000U_UG/NG			UG/KG
N-BUTYL BENZYL PHTHALATE	34295 _5.000U_UG/KG			UG/KG
HENZIDINE	34121 _5.000U_UG/KG	·		UG/NG
	37121UUUUUG/KG	·		UG/KG
100 071-50 007-11-50 00-50	STATE OF THE PARTY OF THE PARTY OF			

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF __13,000 ug/kg.___

NUTES: 1) J-ESTIMATED VALUE

- 2) K-ACTUAL VALUE IS KNOWN TO HE LESS THAN VALUE GIVEN.
- 3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
- 4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
- 1:4 1: 5) NA-COMPOUND NOT ANALYZED FOR.

- 6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- 71 A-AVERAGE VALUE
- B) AND/OR AZOBENZENE
- 9) AND/UK DIPHENYLAMINE
- 10) PHENANTHRENE AND/OR ANTHRACENE
- 11) CHRYSENE AND/OR 1.2-BENZANTHRACENE
- 12) BENZU (B) FLUORANTHENE AND/OR BENZO (K) FLUORANTHENE

DATE: 07/15/81

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SEUDGE (DRY WT)

EPA-SAD+HGN.IV ATHENS+GA

PROJECT #: 81-131 PROG ELEMENT #: HWSR

SOURCE: CENTRAL HARDWARE HALEIGH

SAMPLE TYPE: SEDIM

SAMPLE RECEIVED (DATE & TIME): U7/10/81 850

SOURCE: CENTRAL HAROWARE MALETO

. 25014

SAMPLE START (DATE & TIME) : 07/08/81 1345

CITY: RALEIGH

STATE: IN

SAMPLE STUPIDATE & TIME): 00/00/00

STATION: CHP-100 TOE OF SLOPE HEHIND STORE

. SAU NO.: 01C2007

CHEMIST: McDaniel COMPLETED 7/27/81

ARSENIC HURON HURO	1000	ELEMENT		STURETH	UNITS
AS 01003 76 MG/K HURON	SILVER		АЬ	01078	
HURON BARIUM BARIUM BARIUM BERYTEIUM CAUMIUM COULOZE 3U MOZAN COULOZE COULOZE 3U MOZAN MO	F-10 (C-10-10-10) (A C-10-10-10-10-10-10-10-10-10-10-10-10-10-		AS	01003	76MG/KG
## HARIUM ## U1008 ## MG/K ## MYLLIUM ## U1013 ## MG/K CAUMIUM CD U1028 ## MAI MG/K COBALT CO U1038 ## MAI MG/K COPPER CU U1043 15 MG/K MOLYRDENUM MO U1003 ## MG/K NICKEL ## U1008 14 MG/K ANTIMONY \$# U1008 12U MG/K FELENIUM \$# U1008 12U MG/K SELENIUM \$# U1008 12U MG/K SELENIUM \$# U1008 12U MG/K STRONTIUM \$# U1103 30U MG/K THAUTUM \$# U1103 447 MG/K VANADIUM V U1088 44 MG/K VITRIUM \$# U1008 44 M			н	01023	
BENYLLIUM		5. 8	BA	90010	
CAUMIUM COBALT CO 01038 NAI MG/K COBALT CO 01038 NAI MG/K COROMIUM CO 01039 NAI MG/K COPPER CU 01043 15 MG/K MULYNDENUM MU 01003 NA MG/K NICKEL NI 01008 14 MG/K NICKEL NI 01008 12 MG/K MG/K ANTIMONY SE 01098 12U MG/K SELENIUM SE 01148 12U MG/K STRONTIUM STRONTIUM STRONTIUM TH 45513 12U MG/K THALLIUM TH 45513 12U MG/K THALLIUM TH 45513 12U MG/K THALLIUM TH 45514 11 MG/K THALLIUM TH 45514 11 MG/K THALLIUM TH 10103 NA MG/K TH 101			ь£	01013	3U_MG/KG
COURT			CO	01028	3U_MG/KG
CHROMIUM COPPER CU 01043 15 MG/K MOLYHDENUM NICKEL NI 101008 14 MG/K ANTIMONY SELENIUM SELENIUM SIRONTIUM STRONTIUM STRONTIUM TELLURIUM TITANIUM TITUIDS			CO	8£010	
COPPEH	174/7017 (. E.J.)		CR	01029	
MOLYHDENUM NICKEL NI 101008 14 M6/K1 NICKEL LEAD ANTIMONY SELENIUM SELENIUM STRONTIUM STRONTIUM TELLURIUM TITANIUM TITAN			CU	01043	15MG/KG
NICKEL LEAD PB 01052 12 MG/K ANT IMONY SELENIUM SELENIUM STRONTIUM TIN			MO	01003	
DEAD			10	BOULU:	
ANT I MONY SELENIUM SELE			Pti	01052	
STRUNTIUM			SB	01098	12U_MG/KG
STRONTIUM	SELENIUM		St	U1148 .	12U_MG/KG
TELLURIUM TELLURIUM TI U1153 447 MG/N TITANIUM TI U1153 447 MG/N TIPALLIUM TL 34480 30U MG/N VANADIUM VANADIUM Y U1088 44 MG/N YITRIUM Y 45514 11 MG/N ZIRC ZN U1093 38 MG/N ZIRCONIUM MERCURY HG 71921 0.06MG/N ALUMINUM MERCURY HG 71921 0.06MG/N MANGANESE CAL CIUM CA U1103 390 MG/N MANGANESIUM MAGNESIUM MAGNESIUM MAGNESIUM MAGNESIUM TRON FE U1170 25,600 MG/N SODIUM CYANIDE CN U0721 MG/N			SN	01103	30U_MG/KG
TIT ANIUM TI UI153 447 MG/N TRALLIUM VANADIUM VANADIUM V U1088 44 MG/N VITRIUM V U1088 44 MG/N VITRIUM V U1088 44 MG/N VITRIUM V U1093 38 MG/N VIRCONIUM VZR U1153 NA MG/N MERCURY ALUMINUM ALUI108 21,200 MG/N MAGNESE CALCIUM MAGNESE CALCIUM MAGNESIUM MAGNESIUM MAGNESIUM MAGNESIUM TRON FE U1170 25,600 MG/N SODIUM CYANIDE TI U1153 447 MG/N MG/N MG/N MG/N TI U1153 447 MG/N MG/N MG/N MG/N TO U0934 3300 MG/N CYANIDE TO U0721MG/N	STRUNTIUM		SH	01063	
TITANIUM TRALLIUM TRA	TELLURIUM		1 t.	45513	
TRALLIUM VANADIUM VANADIUM VI 01088			T 1	U1153	
VANADIUM V 01088 44 MG/K YITRIUM Y 45514 11 MG/K XITC ZN 01093 38 MG/K ZIRCONIUM ZR 01103 NA MG/K MERCURY HG 71921 0.06MG/K ALUMINUM AL 01103 390 MG/K MARGANESE MN 01053 390 MG/K CALCIUM CA 00917 1,800 MG/K MAGNESIUM MG 00924 2,500 MG/K 1RON FE 01170 25,600 MG/K SODIUM NA 00934 300U MG/K CYANIDE CN 00721 MG/K			TL	34480	30U_MG/KG
YITRIUM Y 45514 11 MG/K XITC ZN U1093 38 MG/K ZIRCONIUM 'ZR U1163 NA MG/K MERCURY HG 71921 0.06MG/K ALJMINUM AL U1108 21,200 MG/K MANGANESE MN 01053 390 MG/K CALCIUM CA 00917 1,800 MG/K MAGNESIUS MG 00924 2,500 MG/K 1RON FE 01170 25,600 MG/K SODIUM NA 00934 300U MG/K CYANIDE CN 00721 MG/K			٧	01088	44MG/KG
ZINC			Y	45514	
MERCURY AL UTION MERCURY AL UTION AL UTION MANGENESE CAL CTOM MAGNESION TRON SODIUM CYANIDE ME 71921			ZN	01093	
MERCURY ALUMINUM ALUTIUS 21,200 MG/K MANGANESE AN 01053 390 MG/K CALCIUM CA 00917 1,800 MG/K MAGNESIUM ARGON FE 01170 25,600 MG/K SODIUM CYANIDE C. 0.06MG/K 170N MG/K	ZIRCONIUM		·ZR	01163	
ALUMINUM AL U1108 21,200 MG/K MANGANESE NN 01053 390 MG/K CALCIUM CA 00917 1,800 MG/K MAGNESIUM MG 00924 2,500 MG/K 1RON FE 01170 25,600 MG/K SODIUM NA 00934 3000 MG/K CYANIDE CN 00721MG/K			HG	11921	0.06MG/KG
MANGANESE			AL	01103	21,200 MG/KG
CALCIUM MAGNESIU> IRON SUDIUM CYANIDE CA UU917 1,800 MG/K MG UU924 2,500 MG/K MG UU924 2,500 MG/K CYANIDE CA UU917 1,800 MG/K CA UU917 2,500 MG/K CA UU917 1,800 MG/			MH	01053	390_MG/KG
MAGNESIO? IRON FE U1170 25,600 MG/K SUDIUM CYANIDE MG 00924 2,500 MG/K 1170 25,600 MG/K 10934 3000 MG/K CYANIDE MG 00924 2,500 MG/K CYANIDE			CA	00917	1,800 MG/KG
TRON FE U1170 25,600 MG/K SUDIUM NA UU934 300U MG/K CYANIDE CN UU721MG/K			MG	00424	2,500 MG/KG
SODIUM NA	STATE OF THE PARTY		(4) THE		
CYANIDE CN UUTZ1MG/K			24.00 TO		3000 MG/NG
CTATIBLE		100 100	2000		MG/KG
			550000	16/10 TO 1747/	MG/KG
CHROMIUM . HEXAVALENT CH(6)		VAI FNT			
# MOISTURE M 70320		1255111			20 %

NOTES: 11 K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.

^{2) 1-}ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.

³⁾ A-AVEPAGE VALUE

⁴⁾ NU-ELEMENT NUT ANALYZED FUR

⁵⁾ U - None detected at this level.

⁷⁾ NAI - Not analyzed for due to interferences.

DATE: 07/15/81

tores.

(104 1)

US EPA REGION IV S&A DIVISION LABORATORY SERVICES BRANCH DATA REPORTING SHEET 81C2007 - 81C2007

PROJECT # 01-131000PROG ELEMENT # HWSR

SOUNCE: CENTRAL HANDWARE RALEIGH

SAMPLE RECEIVED DATE & TIME: 07/10/81

CITY : HALEIGH

STATE: IN

CHEMIST:

SAD NO.	STATION	SAMPLED	100000000000000000000000000000000000000		TU BE RUN					
816,2007	CHR-100 TOE OF SLUPE BEH!	07/08/81- 13	45- SEDIM	: 0HGS	:PEST	: VOA	:METSC	MG/KG:CN	MG/KG:HG	MG/KG:
			•	<u>:</u>	:		:	٠,,	119:	:
62				:	:	:	:	:	:	:
27	r			:		:	:		:	:

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.

2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.

U.S. ENVIRONMENTAL PROTECTION AGENCY SURVEILLANCE AND ANALYSIS DIVISION

ATHENS ,GEORGIA

REGION IV

DISCHARGER	entral Har Kaleigh J	dware Roll	Reigh	SAMPLING STATION NO. CHR-100 SAMPLING LOCATION THE OF Slope Show Store				
CONTACT						300-9		
	SAMP	LE AND WA	STE	FLOW	INFORM	ATION		
SAMPLER DE	PA DISCHARGE	R	AUTO. C	TYPE			N. INTERVALS FLOW PRO.	
		SAMPL	E C	OLLECT	ION			
	COMPOSITE		GI	RAB SAN	APLES		SAMPLE CODE LE	
SAD NO. 8/C		2007					BACTERIAL O	
DATE	/	7/8/8/					BOD, COD, TOC	
TIME		13 4-5					CYANIDE (2)	
FLOW ()LL	Tanka Albania Salaman Marka Nafi Arabida an						METALS, H9 3	
TEMPERATURE °C	497 (0.12)						ORG, DAG, PEST (5)	
pH							PHENOLS 6	
TOT. CI2 RES,mg/I							PHÉNOLS 6 SOLIDS 7	
	Tall to Carne Health	-				 	10 KOK (8)	
SAMPLE CODE	PERIODIA SI PERIODIA	735.8		4 10	1 7.	 		
SAMPLED BY (Sig)		KIKE		Consul	12. ct/			
SEALED BY (Sig)		Al Bul	2	TOPL	Leuth		A B	
DATE AND TIME		7/8/8	1/2	350			PRESERVED P	
L Use Avg. Flow for	Composites and Inst	. Flow for Grabs		2 Circle o	r Indicate A	nalysis and E	inter Numerical Code	
	HO HOUSE CHE	CUSTODY						
				TIME				
SAMPLES RELEASE	ED TO LEIGH OR SH	IPPEU VIA U	10-8/		NO. CONT.	NO CART.	RECEIPT NO.	
Samuel Z	Hucum		0-01	0000				
				le				
		REMARK	S AN	ID SKE	TCHES			
1 97	1			一并		Por	King lot	
1 pt	restain 1A	5		cr	1R-100			
wet area dead reget w	- wall					TK	loading doct	
possibly fro herbicide	~	K**		•	1			
gee il	1 1	t pho		- 5			herbicide mel	
nous	/ 1			, /	.: /~	ancu as	- serve high	

U. S. ENVIRONMENTAL FROTECTION AGENCY REGION IV

RECEIPT FOR SAMPLES

The samples described below were collected in connection with the administration and renforcement of the:

&	A Resou speci	rce Con fically	servati Section	on and	d Recov	very Act	(RCRA) 4: U.S.C. §69	2 U.S.C. 927.	§ 6901, <u>e</u> t	seq.,	
() Toxic Secti	Substa on 11 o	nces Conf	ntrol 15 U	Act (TSCA) 15 \$2610.	U.S.C. \$2	2601, <u>et</u>	seq., spe	cifically	
Inspect), Calley	c. Statio	-RI, At.	hus Ga	306
Cont Name of	Firm	Hord	wre	Role	ush,	3292	Austin 1	ean Hwy	., Man	Lus Gu	381
Lorr	g E	ngled	low	N	long	Title	address:	· .	10	3853	
TILII ON	net, op	eracor (or Agen	c: 		Title	,			e .	
/////// /////// SAMPLE		//////// /////// ::CTED	//////////////////////////////////////				//////////////////////////////////////		//////// //////// (SAMPLE D	//////////////////////////////////////	
NUMBER CHR-100	42 000	1345	WATER	SOIL	O'THER	OFFERED	ACCEPTED	REJECTED			
	1000	, , , ,									
-	-	٠,								9	
-		٠									
7//////	(((1)))	1111111	777777	77777	77777	////////	77777777	7777777		77777777	
Receipt above is	for the	sample	(s) des	cribe	-d	Receipt	/////// Rejection	of Dupli	cate or	////////////Split	
Fu	11/2	L	2		<u></u>	Lar	Is hereby	alde	_		
Signatur	mpe or in			er		Stere	e of Firm	nan ek	perator (or Agent	
Title					- : 777777	Title	////////	TITITITI	7777777	. mmm	
					111111		111111111				



Potential Hazardous Waste Site

PRELIMINARY ASSESSMENT

CENTRAL HARDWARE

TND980838700

MEMPHIS (RALIEGH), SHELBY COUNTY, TENNESSEE

PRELIMINARY ASSESSMENT CENTRAL HARDWARE

The Central Hardware site is located in North Memphis (Raleigh) at 3292 Austin Peay Highway. The property is owned by Walker Hall Investment Company, also of Raleigh. Central Hardware is the only facility to have operated on this site. Central Hardware is a retail store and does not manufacture on site or produce any hazardous waste, thus, there has been no site disposal.

The hazardous material present is this site consists of DDT 20 pm, DDE 10 ppm, DAD 10 ppm, and arsenic 76 ppm. Ansar, a herbicide containing monosodium acid of methanearsenate was used for spot weed control on a bank which apparently cuts into the water table. Sampling by EPA in 1981 revealed the above mentioned concentrations in the soil. This herbicide is the only hazardous material known to have been on site.

Possible contamination of groundwater could result from percolation of rain water through the soil. Contamination of surface water is possible from runoff. Nearest surface water is an unnamed intermittent tributary of the Wolf River which is approximately I mile to the southwest.

The site is surrounded to within 400 to 1000 feet on all sides but the northwest by the suburbs of Raleigh. There are approximately 4000 residents within 1 mile of the site. The Wolf River is approximately 1 mile south of the site and Lake Windermere is approximately 1 mile west of the site. There are no wildlife refuges or sensitive environments nearby.

A site inspection with sampling is recommended for this site on a low priority. The elevated levels of arsenic revealed by sampling are accountable by the use of the herbacide (Ansar) for weed control. Further sampling should be undertaken to determine the extent and nature of the pesticides revealed in the soil. Sampling should also determine the extent, if any, of migration of the contaminants off site.

REFERENCES

- Report Hazardous Waste Site Investigation Central Hardware Raleigh, Memphis, Tennessee.
- 2. Phone conversation with Central Hardware personnel on 5/14/85.

MH/bec/3012 Program

	NTIAL HAZARI			Ε	V40/00/00	STATE 02 S	SATION	
		ORMATION AND ASSESSMENT						
SITE NAME AND LOCATION								
SITE NAME (Legal, common, or descriptive name of site)	ľ				FIC LOCATION IDE	NTIFIEM		- 1
Central Hardware			2 Austin	Peay Too cou			Tozcouni	MOS CONG
Memphis (Raleigh)		TN	38 79	She			CODE 157	DIST 08
Simose	SITUDE					***************************************	***************************************	
	_ 50							
Directions to Site (Staring from nearest public road) Take Jackson Ave. North out of N	Memphis to A	Ralie	gh. NEx	t to	K-Mart.			
II. RESPONSIBLE PARTIES								
OWNER (# known)			T (Business, melling		0.0			
Walker Hall Investment Co.			stin Pea		6 TELEPHONE NU	MOED T		
метрhis (Raleigh)		TN TN	38179	1.	1901 386-6	C 6 C 3 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5		
OT OPERATOR (if known and different from owner)			T (Business, maling		REPUBLISH NUMBER OF	0421		
Central Hardware			tin Peay		3.5			
Memphis		TN	38179		901, 372			8
13 TYPE OF OWNERSHIP (Check one)								
Ă A. PRIVATE □ B. FEDERAL:	(Agency name)		_ C. ST.		D.COUNTY	E. MUN	CIPAL	
☐ F. OTHER:	,,		D G. UN	KNOWN	1			
T. A. RCRA 3001 DATE RECEIVED:	B. UNCONTROLL	ED WAST	TE SITE ICERCIA	103 c) [DATE RECEIVED	MONTH DA	V YEAR	C. NONE
IV. CHARACTERIZATION OF POTENTIAL HAZARD								
	PA DB. EPA	CONTR	ACTOR	D C. 8	TATE OI	OTHER	CONTRACTO	an
	OCAL HEALTH OFF						- CONTINUE TO	_
	RACTOR NAME(S):				(30	ecily)		_
D2 SITE STATUS (Check one)	03 YEARS OF OPER	ATION					_	
☐ A. ACTIVE X B. INACTIVE ☐ C. UNKNOWN		EGINNING Y	EAR ENC	NING YEAR		UNKNOWN	1	
OA DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN Ansar herbacide was used on an e is a monosodium acid of methanea arsenic.	embankment w	which Soil s	cut into	o gro	oundwater EPA showed	zone. d trace	Ansar es of D	herbaci DT, DDE
D5 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND	OR POPULATION							
Possible contamination of ground	d and surfac	e wat	ter from	pest	ticede in	soils.		
V. PRIORITY ASSESSMENT								
O1 PRIORITY FOR INSPECTION (check one If high or medium is checked. ☐ A. HIGH [Inspection required promptly] ☐ B. MEDIUM [Inspection required]	C. LOW (Inspect on time		D 0. N	ONE .	E Conditions and incide titin needed, complete		Mon Asim)	
VI. INFORMATION AVAILABLE FROM								
UI CONTACT	02 OF (Ayency Organia	retion)			56		03 TELEPHO	NE NUMBER
Larry Engledon	Manager,			are				72-0900
Todd Hughes	H & E	OF ALLEGAN	SANIZATION SWM		1615) 741		5 1	13,85

EPA FUHM 2070-12 (7-81)

•	_	-
		תע

POTENTIAL HAZARDOUS WASTE SITE

I. IDENT	IFICATION
OI STATE	02 SITE NUMBER D 980838700

WEP	A			ASSESSMENT EINFORMATION		TN D 98	30838700
II. WASTE ST	TES, QUANTITIES, A	ND CHARACTER	IISTICS				
O1 PHYSICAL STA	TES ICHOCA STINU SEDINI I) E SLURRY FINES X; F. LIQUID I G GAS	O2 WASTE QUAN (Measures must b TONS CUBIC YARDS	TITY AT SITE of weste quantities e-independenty	O3 WASTE CHARACTI	SIVE LIFTINFE	UBLE LI LHIGHLY CTIOUS LI J. EXPLOS MMABLE LI K. RÉACT FABLE LI L. INCOMI	SIVE IVE PATIBLE PPLICABLE
III. WASTE TY		NO. OF DRUMS					<u>. </u>
CATEGORY	SUBSTANCE		T				
SLU	SLUDGE	KAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS		
OLW	OILY WASTE		 				
SOL	SOLVENTS		 				
PSD	PESTICIDES		 				
			trace				
occ	OTHER ORGANIC C	0.55 (0.50 (0.70 (0	 				
ACD	INORGANIC CHEMIC	ALS	 				
	ACIDS		ļ				
BAS MES	BASES HEAVY METALS		 				
100000000000000000000000000000000000000	US SUBSTANCES (See A		trace				
CATEGORY	02 SUBSTANCE N						T OR MEASURE
CATEGORI	UZ SOBSTANCE N	TAME	03 CAS NUMBER	04 STORAGE/DISF	OSAL METHOD	05 CONCENTRATION	06 MEASURE C
	DDT						
	DDE					\$ 20ppm	
	000		-			10"	
	Arsenic					₹ 10"	<u> </u>
	7.130/110					5 76"	
						-	
						<u> </u>	ļ
							
			ļ				
						-	
							1
/. FEEDSTOC	KS (See Appendix for CAS Numb	ers;					
CATEGORY	01 FEEDSTOC	K NAME	02 CAS NUMBER	CATEGORY	O1 FEEDST	OCK NAME	02 CAS NUMBE
FDS				FDS			
FDS	T			FDS			
FDS			1	FOS			
FDS				FDS			
I. SOURCES	OF INFORMATION ICH	specific religions as a	. Siate Ides. Sample analysis				
	us waste site				5, 1981.		

POTENTIAL HAZARDOUS WASTE SITE

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

VEPA		INARY ASSESSMENT AZARDOUS CONDITIONS AND INCIDE	ENTS IN	D 980838700
HAZARDOUS CONDI	TIONS AND INCIDENTS			
DI L. A GROUNDWATE		02 (1) OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	X) POTENTIAL	□ ALLEGED
Pesticides	s and arsenic detected	in an area of groundwate	er seepage	
				•
DI DI B. SURFACE WATE	ER CONTAMINATION	02 (*) OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	POTENTIAL	□ ALLEGED
		in the area would give a	potential for	contaminati
01 C. CONTAMINATE	ON OF AIR	02 C) OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	□ ALLEGED
N/A				
01 [.] D. FIRE/EXPLOSION POTEN	/E CONDITIONS	02 □ OBSERVED (DATE:) POTENTIAL	□ ALLEGED
N/A				
		00 C 00000 TO 104T		D.4115050
01 🗇 E. DIRECT CONTA 03 POPULATION POTEI	NTIALLY AFFECTED:	02 OBSERVED (DATE:) DOTENTIAL	□ ALLEGED
Area is ap	pparently accessable t	o public.		8
01 (XF. CONTAMINATI 03 AREA POTENTIALLY		02 (XOBSERVED (DATE: 7/8/81 04 NARRATIVE DESCRIPTION) [] POTENTIAL	[] ALLEGED
Sampling to 76ppm arse	oy EPA revealed concen enic	trations in the soil of	20ppm DDT Ç 10p	opm DDD √ 10pp,
01 C G DRINKING WAT	TER CONTAMINATION NTIALLY AFFECTED:	02 U OBSERVED (DATE:) DOTENTIAL	□ ALLEGED
Not likely	/ as drinking water in	Memphsi area is obtained	from deep wel	ls.
01 TH WORKER EXE		02 [] OBSERVED (DATE:) POTENTIAL	C) ALLEGED
UnKnōŵn 🚉	es inicialor cerenic	9996 40 2 / 1/4		
01 I POPULATION E) [] POTENTIAL	C) ALLEGED
03 POPULATION POTE	NTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION		
Unknown				

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

I. IDENTIFICATION 01 STATE 02 SITE NUMBER TN D 980838700

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued) 02 0 OBSERVED (DATE: 7/8/81) 01 DAMAGE TO FLORA D POTENTIAL D ALLEGED 04 NARRATIVE DESCRIPTION Dead plants observed in area where herbacides were used. 01 D K. DAMAGE TO FAUNA 02 OBSERVED (DATE: __ ☐ POTENTIAL C ALLEGED 04 NARRATIVE DESCRIPTION (Include name(s) of species) Unknown 01 C L. CONTAMINATION OF FOOD CHAIN 02 OBSERVED (DATE: ___ ☐ POTENTIAL ☐ ALLEGED 04 NARRATIVE DESCRIPTION Unknown 01 C M. UNSTABLE CONTAINMENT OF WASTES 02 C OBSERVED (DATE: _ D POTENTIAL D ALLEGED 03 POPULATION POTENTIALLY AFFECTED: **04 NARRATIVE DESCRIPTION** Unknown 01 TN. DAMAGE TO OFFSITE PROPERTY 02 OBSERVED (DATE: ___ ☐ POTENTIAL ☐ ALLEGED 04 NARRATIVE DESCRIPTION N/A 01 0 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTP8 02 0 OBSERVED (DATE: D POTENTIAL ☐ ALLEGED 04 NARRATIVE DESCRIPTION Unknown 01 - P. ILLEGAL/UNAUTHORIZED DUMPING 02 OBSERVED (DATE. [] POTENTIAL O ALLEGED 04 NARRATIVE DESCRIPTION N/A 05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS III. TOTAL POPULATION POTENTIALLY AFFECTED: IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references e.g., state files, cample analysis, reports)

Hazardous waste site investigation report (EPA) 7/8/81